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APR 27 2006

09/759,018

**Patent
IBM Docket No. FIS92000310US1**

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In the United States Patent and Trademark Office

Date: 4/27/06**In re Application of:** Eric V. Kline**Filed:** 01/12/01**For:** COMPOSITION AND METHOD FOR CONTAINING METAL
IONS IN ELECTRONIC DEVICES**Serial Number:** 09/759,018**Confirmation No.** 1799**Art Unit:** 2841**Examiner:** PATEL,
ISHWARBHAI**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Hon. Commissioner of Patents and Trademarks
P. O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

In response to the Final Office Action mailed January 27, 2006, and in conjunction with the Notice of Appeal filed concurrently herewith, the Applicants submit the following remarks in support of the Pre-Appeal Brief Request For Review:

- 1 -

09/759,018**Patent
IBM Docket No. FIS92000310US1****REMARKS**

The present submission is responsive to the Final Office Action of January 27, 2006, in which claims 4 to 13 are presently pending. Claims 4 and 5 have been rejected by the Examiner under 35 USC §102(b) as being anticipated by Berger U.S. Patent 4,030,948 (hereafter "Berger"). Claims 4 to 9 have been rejected by the Examiner under 35 USC §103(a) as being unpatentable over Raiser et al. U.S. Patent 6,700,209 (hereafter "Raiser") in view of Berger. Finally, claims 11 to 13 have been rejected by the Examiner under 35 USC §103(a) as being unpatentable over Raiser and Berger and further in view of Ikeda et al. U.S. Patent 5,973,930 (hereafter "Ikeda").

Certain claim objections were made with respect to claims 9 and 12 but are believed to be removed as a result of an interview with the Examiner, discussed below.

The Examiner has failed to establish a *prima facie* case in support of the existing §102 and §103 rejections for the reasons that (i) Berger alone does not show, and Raiser in view of Berger, do not teach "a chelating agent which is bonded to said insoluble and immobile phase" as claimed in claim 1, (ii) Raiser in view of Berger do not teach "wherein said package comprises an organic package and wherein said composition is said organic package" as claimed in claim 9, and (iii) Raiser in view of Berger and Ikeda "wherein said composition is said printed circuit board" as claimed in claim 12. Each of these will be discussed separately.

(i) Berger alone does not show, and Raiser in view of Berger, do not teach "a chelating agent which is bonded to said insoluble and immobile phase" as claimed in claim 1

09/759,018**Patent
IBM Docket No. FIS92000310US1**

The Examiner in the Final Office Action states that this element is shown or taught by Berger wherein the immobile phase, supposedly polyimide particles, are in a matrix, also supposedly polyimide. This poorly formulated rationale in the Final Office Action does not show or teach the above element because there is no immobile phase in a matrix. That is, polyimide can only be soluble within polyimide and thus is not insoluble and immobile. During the interview with the Examiner on April 7, 2006, however, it was then determined that what the Examiner actually meant (but never stated in the Final Office Action) was that the filler particles noted at column 9, lines 33-37, are the immobile phase. It should be noted that only one of these particles is a polymer and there is no indication that these particles are insoluble and immobile in the polyimide matrix.

Berger does teach a composition capable of being "...modified with chelating materials admixed therewith or chemically bonded thereto." (col. 4, lines 6-9) Applicants further learned during the interview that it is the Examiner's opinion that chelating agents in the composition of polyimide plus filler material show or teach the above claim element notwithstanding that there is no disclosure or teaching in Berger that the chelating agents are actually bonded to the filler particles.

It is submitted that the Examiner's position is erroneous. For anticipation, each and every element of the claim must be taught. The above element of claim 1 requires "a chelating agent which is bonded to said insoluble and immobile phase" as claimed in claim 1. As there is no disclosure in Berger to indicate that the polymer filler particles are insoluble and immobile in the polyimide matrix and that the chelating agent is bonded to the polymer filler particles (assuming *arguendo* that they are insoluble and immobile in the polyimide matrix), then Berger cannot show this element of Applicants' claim 1 and claim 1 is, therefore, not anticipated.

09/759,018

Patent
IBM Docket No. FIS92000310US1

Nor is there any teaching in Berger that the polymer filler particles are insoluble and immobile in the polyimide matrix or that the chelating agent is bonded to the polymer filler particles. As noted above, there is disclosure in Berger that the chelating agent may be admixed in the composition or chemically bonded thereto. However, there is no teaching that the chelating agent is added when there are polymer filler materials and, more importantly, there is no teaching to add the chelating agent so that it will bond to the polymer filler particles. It is equally likely that the chelating agent could be bonded to the matrix material. It is important to Applicants' invention that the chelating agent be bonded to the insoluble and immobile particles so that should the matrix be attacked by the environment, the matrix is partially dissolved but the chelating agent remains since it is bonded to the insoluble and immobile particles. In Berger, the coating already is impervious to moisture (col. 3, lines 58-59) so there is no motivation to bond the chelating agent to the polymer filler particles (assuming *arguendo* the polymer filler particles are insoluble and immobile in the polyimide). Accordingly, Berger does not teach this element of Applicants' invention and therefore the combination of Raiser and Berger cannot render obvious Applicants' claim 1.

(ii) Raiser in view of Berger do not teach "wherein said package comprises an organic package and wherein said composition is said organic package" as claimed in claim 9

In the rejection of claim 9, the Examiner stated in the Final Office Action that Berger in figure 5 discloses a substrate made of resin and the composition 160 (containing the chelating agent) is contained within the package (Raiser clearly does not teach the above element).

Applicants submit that this position is erroneous. The disclosure in Berger is for a coating 160 which is on the organic package. Claim 9 requires that "said composition is said

09/759,018**Patent**
IBM Docket No. FIS92000310US1

organic package" not that the composition is on the organic package. While the Examiner may argue that the coating 160 forms a part of the organic package, it is not the organic package per se as claimed by Applicants in claim 9. Therefore, Berger cannot teach this element of Applicants' claim 9 and thus the Examiner has failed to state a *prima facie* case of obviousness with respect to claim 9.

(iii) Raiser in view of Berger and Ikeda do not teach "wherein said composition is said printed circuit board" as claimed in claim 12

In the Final Office Action, the Examiner applied the same rationale for the rejection of claim 12 as was applied for the rejection of claim 9. Raiser and Ikeda clearly do not teach the above element.

Applicants' remarks applicable to the patentability of claim 9 are equally applicable to the rejection of claim 12. That is, the disclosure in Berger is for a coating 160 on the organic package but Berger does not teach "wherein said composition is said printed circuit board". Accordingly, Berger cannot teach this element of Applicants' claim 12 and thus the Examiner has failed to state a *prima facie* case of obviousness with respect to claim 12.

09/759,018**Patent
IBM Docket No. FIS92000310US1**

For the above stated reasons, it is submitted that the final rejection of claims 4 to 13 is in error and that the same are allowable over the art of record. It is believed that no fees are due with respect to this submission but if any fees are due, please charge the fees to Deposit Account No. 090458.

Respectfully Submitted,

Eric V. Kline



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